
Madoc Drinking Water System Annual Water Report

Reporting period of January 1, 2018 – December 31, 2018

Prepared For: Corporation of the Municipality of
Centre Hastings

Prepared By:  **Ontario Clean Water Agency**
Agence Ontarienne Des Eaux

This report has been prepared to satisfy the annual reporting requirements of the Provincial Regulations and Guidelines established by the Ministry of the Environment in the Province of Ontario including the section 11 and Schedule 22 reports identified in O.Reg 170/03, Drinking Water Systems Regulation and the Permit to Take Water Reports identified in O.Reg 387/04, Water Taking and Transfer Regulation.

Compliance Report Card

Drinking Water System Number:	220001575
System Owner:	Corporation of the Municipality of Centre Hastings
Operating Authority:	Ontario Clean Water Agency
Drinking Water System Category:	Large Municipal Residential
Reporting Period:	January 1, 2018 – December 31, 2018

Report Availability

Population Served:	< 10,000
Website where the annual report can be viewed by the public:	www.centrehastings.com
Alternate location where annual report will be available for inspection and is free of charge:	Municipal Office
How are system users notified that the annual report is available and is free of charge?	Public access/notice via Municipal Website
Number of Designated Facilities served:	None
Has a copy of this report been provided to all Designated Facilities?	N/A
Number of Interested Parties reported to:	N/A
Has a copy of this report been provided to all Interested Parties?	N/A
The following Drinking-Water Systems receive drinking water from this system:	N/A
Has a copy of this report been provided to connected owners?	N/A

Event Summary	# of Events	Date	Details
Ministry of Environment Inspections	1	Feb 12, 2018	Announced – Detailed Drinking Water Inspection – Final Inspection Rating of 100%
Ministry of Labour Inspections	0		
DWQMS Audits	1	Jun 29, 2018	12 Month Surveillance Audit performed by SAI Global
AWQI's	2	March 26, 2018	AWQI# 138997
		June 25, 2018	AWQI# 140102
Non-Compliance	0		
Community Complaints	0		
Spills	0		

Treatment Chemicals used during the reporting year:

Chemical Name	Use	Supplier
Sodium Hypochlorite	Disinfection	Brenntag

Summary of Non-Compliance

Non-Compliance Identified in a Ministry Inspection:

Ministry of Environment Inspection Rating: 100%

Legislation	requirement(s) system failed to meet	duration of the failure (i.e. date(s))	Corrective Action	Status
N/A				

Adverse Water Quality Incidents

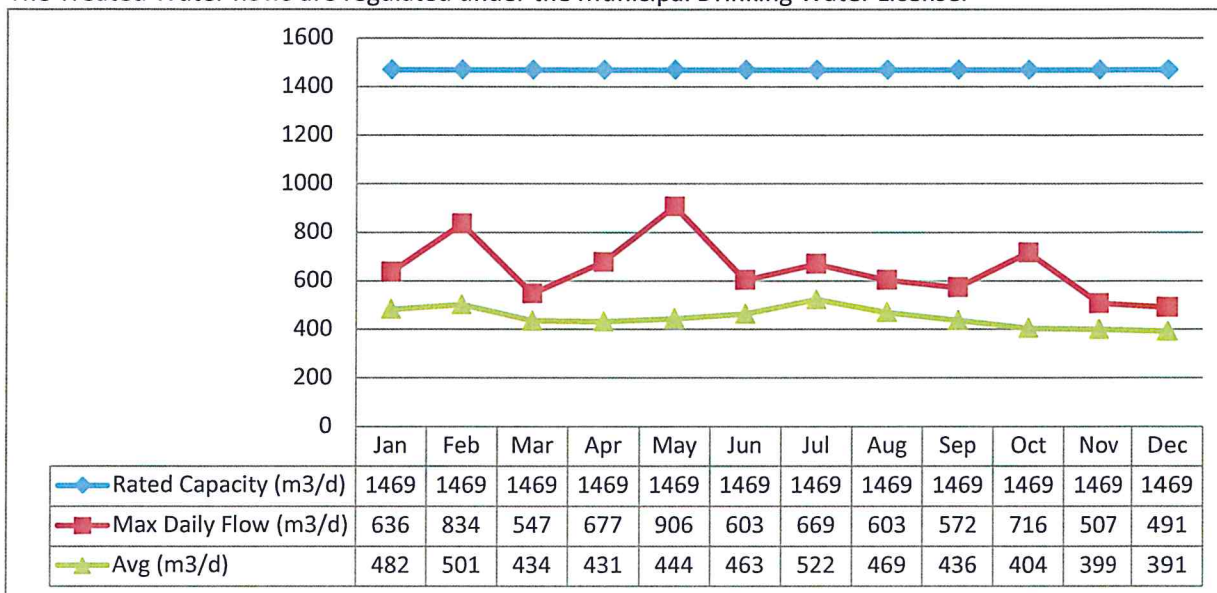
Date	AWQI #	Cause			Corrective Action Taken
		Parameter	Result	Exceedance of	
March 26, 2018	138997	TC	156	0	As directed by the Health Unit the operating authority completed a re-sample and retest of the location. Also following Reg. 170/03 the operating authority collected an upstream and treated water sample during this event.
June 25, 2018	140102	Sodium	63.7	20	As per Reg. 170/03 the operating authority collected a re-sample and retest of the location.

Non-Compliance

Legislation	requirement(s) system failed to meet	duration of the failure	Corrective Action	Status
N/A				

Treated Water Flows - TW3

The Treated Water flows are regulated under the Municipal Drinking Water License.



Regulatory Sample Results Summary

- RW2 = Raw Water Well 2
- RW3 = Raw Water Well 3
- TW3 = Treated Water Well 3
- DW = Distribution Water

Microbiological Testing

Location	Number of Samples	E. Coli Results (min) - (max)	Total Coliform Results (min) – (max)	Number of HPC Samples	HPC Results (min) - (max)
Raw - RW2	52	0 – 3	0 – 28	~	~
Raw - RW3	52	0 – 8	0 – 136	~	~
Treated - TW3	53	0 - 0	0 – 0	52	0 – 8
Distribution - DW	126	0 - 0	0 - 156	124	0-11

Operational Testing

On-Line

Parameter	Range of Results (min # - max #)
Turbidity, Well #3 Filter Effluent Train # 1 (NTU)	0.00 – 2.00 NTU*
Turbidity, Well #3 Filter Effluent Train # 2 (NTU)	0.00 – 2.00 NTU*
Chlorine, Well #3 Treated	0.00 – 5.00 mg/L*
Total Chlorine, Distribution	1.28 – 2.94 mg/L
Free Chlorine, Distribution	1.04 – 2.54 mg/L

* Instrument spikes and dips recorded by on-line instrumentation were a result of air bubbles and various maintenance and calibration activities. Power interruptions may also cause an instrument reading to drop to zero. All events are reviewed for compliance with O. Reg. 170/03 and if warranted, are reported to the Ministry of Environment as Adverse Water Quality Incidents.

Inorganic Parameters

- MAC = Maximum Allowable Concentration as per O.Reg 169/03
- BDL = Below the laboratory detection level
- Fluoride and Sodium are only required to be tested every 60 months.

Parameter	Sample Date	Result Value	MAC	Exceedance	
				MAC	½ MAC
Antimony: Sb (ug/L) - TW3	2018/03/12	0.87	6.0	No	No
Arsenic: As (ug/L) - TW3	2018/03/12	2.3	25.0	No	No
Barium: Ba (ug/L) - TW3	2018/03/12	166.0	1000.0	No	No
Boron: B (ug/L) - TW3	2018/03/12	14.0	5000.0	No	No
Cadmium: Cd (ug/L) - TW3	2018/03/12	0.133	5.0	No	No
Chromium: Cr (ug/L) - TW3	2018/03/12	0.78	50.0	No	No
Mercury: Hg (ug/L) - TW3	2018/03/12	<MDL 0.01	1.0	No	No
Selenium: Se (ug/L) - TW3	2018/03/12	0.29	50.0	No	No
Uranium: U (ug/L) - TW3	2018/03/12	0.707	20.0	No	No
Additional Inorganics					
Nitrite (mg/L) - TW3	2018/01/08	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW3	2018/04/03	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW3	2018/07/16	<MDL 0.003	1.0	No	No
Nitrite (mg/L) - TW3	2018/10/09	<MDL 0.003	1.0	No	No
Nitrate (mg/L) - TW3	2018/01/08	2.33	10.0	No	No
Nitrate (mg/L) - TW3	2018/04/03	1.53	10.0	No	No
Nitrate (mg/L) - TW3	2018/07/16	2.16	10.0	No	No
Nitrate (mg/L) - TW3	2018/10/09	2.68	10.0	No	No
60 Month Sampling					
Sodium(mg/L)-TW3	2018/07/25	63.7	20.0	Yes	Yes
Fluoride(mg/L)-TW3	2018/07/25	0.45	1.50	No	No

Tetrachloroethylene (ug/L) - TW3	2018/03/12	<MDL 0.35	10.00	No	No
2,3,4,6-Tetrachlorophenol (ug/L) - TW3	2018/03/12	<MDL 0.2	100.00	No	No
Triallate (ug/L) - TW3	2018/03/12	<MDL 0.01	230.00	No	No
Trichloroethylene (ug/L) - TW3	2018/03/12	<MDL 0.44	5.00	No	No
2,4,6-Trichlorophenol (ug/L) - TW3	2018/03/12	<MDL 0.25	5.00	No	No
(MCPA) (ug/L) - TW3	2018/03/12	<MDL 0.12	45.00	No	No
Trifluralin (ug/L) - TW3	2018/03/12	<MDL 0.02	1.00	No	No
Vinyl Chloride (ug/L) - TW3	2018/03/12	<MDL 0.17	100.00	No	No
DISTRIBUTION WATER					
Trihalomethane: Total (ug/L) Annual Average - DW	2018/01/01	17.50	100.00	No	No
HAA Total (ug/L) Annual Average - DW	2018/01/01	7.9		N/A	N/A

Maintenance Summary

OCWA uses a risk-based preventative maintenance framework that ensures assets are maintained to manufacturer's and/or industry standards. Maintenance is completed using various tools and operational supports.

OCWA uses a Work Tracking Database (Maximo). Maximo is a maintenance tracking system that can generate work orders as well as give summaries of completed and scheduled work. During the year, the operating authority at the facility generates scheduled work orders on a weekly, monthly and annual basis. The service work is recorded in the work order history. This ensures routine and preventive maintenance is carried out. Emergency and capital repair maintenance is completed and added to the system.




Capital projects are listed and provided to the Corporation of the Municipality of Centre Hastings in the form of a "Capital Forecast". This list is developed by facility staff and provides recommendations for facility components requiring upgrading or improvement.

Preventative/Weekly Maintenance Work Orders Completed	382
Operational Maintenance Work Orders Completed	23
Capital Maintenance Work Orders Completed	3

Maintenance Highlights: major expenses incurred to install, repair or replace required equipment

- Chlorine Injector Check Valve
- Annual Generator Maintenance
- Annual flow meter calibrations
- Install output card Flow Meter
- 3-way valve motor repair
- Install new pressure transmitter for monitoring well

Data for the reporting period of February 13, 2018 – December 11, 2018 was submitted electronically to the Ministry of the Environment and Climate Change on January 7, 2019 under Permit to Take Water #0722-AVPQT8.



Ministry of the Environment,
Conservation and Parks

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Water Taking Data submitted successfully.

Confirmation:


Thank you for submitting your water taking data online.

Permit Number: 0722-AVPQT8
Permit Holder: THE CORPORATION OF THE MUNICIPALITY OF CENTRE HASTINGS.
Received on: Jan 7, 2019 12:35 PM

This confirmation indicates that your data has been received by the Ministry, but should not be construed as acceptance of this data if it differs from that specified on the Permit Number, assigned to the Permit Holder stated above.

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